Amendments to the Claims are as follows:

Please cancel Claims 1-8 and amend Claims 9-12 as follows:

9. (Amended) A method for making a spin-valve thin-film magnetic element comprising:

~~a laminate forming step for~~ forming a laminate on a substrate, the laminate comprising a free magnetic layer, two nonmagnetic conductive layers formed on two surfaces of the free magnetic layer, first and second pinned magnetic layers adjoining the two nonmagnetic conductive layers, respectively, and first and second antiferromagnetic layers adjoining the first and second pinned magnetic layers, respectively, the first and second antiferromagnetic layers comprising Mn and at least one element selected from the group consisting of Pt, Pd, Ir, Rh, Ru, Os, Au, Ag, Cr, Ni, Ne, Ar, Xe and Kr, the second antiferromagnetic layer more proximate to the substrate than the first antiferromagnetic layer;

~~a first annealing step for~~ annealing the laminate at a first annealing temperature while applying a first magnetic field to generate exchange anisotropic magnetic fields in the first and second antiferromagnetic layers ~~so~~ such that ~~the~~ magnetization vectors of the first and second pinned magnetic layers are fixed in the same direction and ~~so~~ such that ~~the~~ an exchange anisotropic magnetic field of the second antiferromagnetic layer ~~near the substrate~~ is larger than ~~the~~ an exchange anisotropic magnetic field of the first antiferromagnetic layer ~~away from the substrate~~; and

~~a second annealing step for~~ annealing the laminate at a second annealing temperature higher than the first annealing temperature, while applying a second magnetic field, which is antiparallel to the first magnetic field, to fix the magnetization vector of the first pinned magnetic layer in a direction which is antiparallel to the magnetization vector of the second pinned magnetic layer.

10. (Amended) A method for making a spin-valve thin-film magnetic element according to claim 9, ~~wherein the~~ further comprising setting a magnitude of the second magnetic field ~~is~~ to be greater than that of the exchange anisotropic magnetic field of the first antiferromagnetic layer generated by the first annealing ~~step~~ and less than that of the exchange anisotropic magnetic field of the second antiferromagnetic layer generated by the first annealing ~~step~~.

11. (Amended) A method for making a spin-valve thin-film magnetic element according to claim 9, ~~wherein~~ further comprising setting the first annealing temperature ~~is~~ to be in a range of 220°C to 250°C.

12. (Amended) A method for making a spin-valve thin-film magnetic element according to claim 9, ~~wherein~~ further comprising setting the second annealing temperature ~~is~~ to be in a range of 250°C to 270°C.